

Abstract

A multiple wavelength semiconductor laser is disclosed. The multiple wavelength semiconductor laser has a first edge emitting type resonator structure and a
5 second edge emitting type resonator structure disposed on a common substrate through a separation region. The first edge emitting type resonator structure has an oscillation wavelength of 650 nm. The second edge emitting type resonator structure has an oscillation
10 wavelength of 780 nm. A low reflection film that is a three-layer dielectric film composed of a first Al_2O_3 film of 60 nm, a TiO_2 film of 55 nm, and a second Al_2O_3 film of 140 nm, where the refractive index of the TiO_2 film is smaller than the refractive index of the first
15 Al_2O_3 film and the refractive index of the second Al_2O_3 film.